

From the asphalt (of the streets) to the blackboard (of the schools)

Exploration of urban environments and cognitive development of children

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The child learning process begins long before school apprenticeship. (...) The psychointelective development of the child takes place in the process of interaction with the natural [physical] and social environment. **Lev Vygotsky**

Our greatest period of geographical exploration is that found in each of us – in our childhood. **Roger Hart**

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In-between the end of classes and dinner time – from school to the neighborhood and home of each child – once upon a time the streets were taken by the kids as their favorite playground. Those indeterminate and unmonitored territories (virtually open) to be explored without strictly delimited boundaries, where limits and rules were permanently negotiated with parents and with neighborhood community and expanded as the children grew up, played a fundamental role for the integral development of children on city areas.

Detached from the countryside environments, the city child is now also deprived from the rich and joyful interplay within the urban environments, as the neighboring socio-physical structures are being disintegrated and the distances covered on daily life increase and extends beyond the walking limits. The replacement of direct social interactions by virtual “networks”, and the consumption of videogames as an alternative to outdoor activities, has subtle but severe consequences that started now to be revealed as children gradually grown up.

There is a close interdependence between the different stages of child development and different levels of environmental knowledge. Environmental discovery and exploration motivates the construction of more complex mental maps, and other essential human aptitudes – acquired along the phylogenic process (human evolution) and displayed on the ontogenetic process (child development): cognitive complexity; social interaction and sociability; integration of other points of view in the own sense of reality; complex narratives; neuromotor coordination; “notion of reversibility”; structured thinking; among many other abilities.

According with environmental psychology concepts, and terminology, the cognition of the environment is related with three dimensions, whose terms were curiously appropriated by computing informatics: the place, in this case the “site”; the path between different places, the “link”; the network of places and links, the “web”. The discovery and exploration of those different dimensions and scales – home and family, neighborhood and community, city and society – and the transitions in-between them, is related and linked with different stages of development.

This article is focused mainly on the urban exploratory activities of kids at the elementary school age. About the beginning of school age the children begins gradually with some exploratory unmonitored incursions on urban environments, adventuring to go beyond “their streets” within the neighborhood limits – in case that the child lives at a “child friendly area” (a relative concept, according with different realities). However it is from the age of seven to eight years old, matching with the transition from the preoperational “egocentric” age to the concrete operational “post-egocentric” stage (Piaget & Inhelder), that the range of action is exponentially expanded with the ability to construct more developed and complex mental maps (Altman & Wohlviill).

This exploratory activities – going further but always going back to the starting place (home), discovering and linking new different areas and places – are then followed by other important capabilities, expanding acquired aptitudes and developing new ones: social interaction; reciprocity with the others; learning mathematical reversible operations; organizing past events in mind and planning future events, according with time and space/place; improving oral expression and complex narratives. The cognitive development of children is driven by some fundamental learning activities, in-between scholar teaching and extra-scholar seizing, as Vygotsky listed.

The “virtual children”, as the “feral children” on the other pole, is occupying a prejudicial and disadvantage place.



Arthur Leipzig, Harlem (1950's)



Robert Adams, New West